Technology

A publication featuring the Information Services technology of Maine State Government

Plan to attend . . .

Maine Digital Government Summit September 8, 2004

The keynotes and sessions for the Digital Government Summit will address the most current and important policy, management and technology issues facing state and local government within the state of Maine.

An advisory board consisting of Maine's state and local business and technology executives, including state Chief Information Officer Richard Thompson has collaborated with Government Technology to create the Summit's program. The keynote speaker will be Ron Crouch, Director of the State Data Center for the University of Louisville. His presentation will focus on: Maine's Citizens of Tomorrow¹.

The Summit's Plenary Session, Leveraging Efforts, Services, Investment and Infrastructure, will discuss today's challenging times, which call for more creativity in getting things accomplished. This is especially true in planning, launching and completing technology projects. It is no longer viable to reinvent the wheel, create stovepipes, or work apart from other agencies and jurisdictions. Leveraging is the key, but just how do you go about it? This plenary session will provide ideas, solutions, inventiveness, and inspiration.

In addition, a **Collaboration Roundtable**, led by a panel of leaders from all levels of government will discuss practical ways to share information and initiatives vertically among the three layers of government. Partnering can lead to economies of scale that have only been imagined up to now. The product of the discussion will be a list of actions to take to get collaboration accomplished.

The session topics for the summit include:

- Architecture for Digital Government
- The Last Mile
- IT Planning
- Data Warehousing A Roadmap
- Wireless Radio Systems
- 10 Steps to an Excellent Project
- Demonstrating the Business Value of IT
- Electronic Records Management
- Migrating to New Technologies
- Security and User Authentication
- The Future of the Internet

Want to learn more? Visit http://www.govtech.net/events. If you are interested in **attending** the Maine Digital Government Summit, which will be held at the Augusta Civic Center, contact Liese Brunner, Sr. Registration Coordinator, by calling 800.917.7732 ext 355 or e-mailing lbrunner@govtech.net.

¹ The demographic landscape is changing. Maine's population is getting older, but coming in right behind is a "digital generation". Government's primary challenge in the next 3 to 5 years will be meeting the divergent needs of its population. Who are the "citizens of tomorrow"? What services will they demand? Who will comprise the labor pool for government and private industry? In this revealing session, leading authority Ron Crouch will discuss the results of his research and his vision for the future.



IT Changes at DHHS

By Mary N. Cloutier

Effective July 1,2004, the new Department of Health and Human Services (DHHS) was created by the Legislature by merging the former Departments of Human Services and Behavioral and Developmental Services. DHHS' focus is to upgrade services to adults, children and families, increase efficiencies, and improve relations with community organizations.

Organizational and functional changes are underway at the new DHHS. In August, I interviewed newly appointed, departmental Chief Information Officer, Craig Hitchings. He, and his staff, are in the process of consolidating the 110+ Information Technology (IT) personnel, in compliance with the statute's mandate, to best support the Department's mission (which is nearly finalized). Focused on service provision, the new organizational

- continued on page 2 -

IN THIS ISSUE: -

Maine Digital Government Summit1
IT Changes at DHHS1
New Wellness Center2
Project & Portfolio Management3
eDMR Affects Maine Municipalities 3
Marvel! Research Databases4
GeoArchives Project5
Electronic Plans Archive at Maine DOT 6
MeTrans in Production at Maine DOT7
Challenge 7
Melicent Versteeg - an Autobiography8

IT Changes at DHHS, cont.

structure will be developed with the active input of all staff. Craig says "we have excellent people with good IT processes in place in both departments; our challenge now is to select the best processes of each for our new department."

While the IT structure is in transition, so is DHHS' bureau structure, which must be approved by the Legislature in the next session. Commissioner Jack Nicholas has established a Commissioner's Implementation Advisory Team (CIAT), composed of State employees and citizens, to work with DHHS staff, external stakeholders, and community partners. The CIAT will advise the Commissioner in developing specific recommendations regarding bureau structure and service delivery.

Although the following organizational chart is not final until the bureau structure is complete, Craig anticipates a major services-based structure will afford senior IT managers more insight into, and direct access to, the programs and bureaus they support. The leaders of the former BDS and DHS technology staffs, Walter Lowell, Joe Radziszewski and Brian Snow, will work with Craig to migrate to the new structure.

Craig has already implemented a significant change in the way DHHS procures personal computers and laptops. In July he signed a service level agreement (SLA) with the Bureau of Information Services (BIS) to lease computers, which will be refreshed every four years, while providing DHHS

the flexibility to purchase equipment if desired. The SLA approach, coupled with a comprehensive inventory, allows for accurate budgeting and workload planning. Heretofore, hardware was usually purchased based on age and when an agency had the funds. Consequently, General Funded programs typically had older equipment, while neighboring federally funded programs utilized productivity boosting new computers. Since DHHS deploys, maintains, and services its 4,000+ personal computers, the SLA enables work to be anticipated and scheduled. The first order for 200 leased PCs was placed in August.

Craig is very interested in working closely with the Office of the Chief Information Officer (OCIO) and complimented OCIO staff contributions to major DHHS projects. Recent examples include Mary Silva on the MECMS steering group, and Kevin Jones on the IPHIS development contract acquisition. He wants an "open and cooperative" relationship with the OCIO and BIS, and looks forward to "working together" to provide integrated solutions to the staff and clients of DHHS.

Craig was a technology manager in the former DHS for 5 years before his current appointment and is a retired Air Force Lieutenant Colonel with a career in information systems management. He and his wife Mary live in Augusta and make frequent trips to Bangor visiting their daughter Alicia, and grandsons Tristan and Craig.

Chief Information Officer Medical and Children Systems Health. Adult and Eligibility Systems Integration and Infrastructure Major Systems: Major Functions: Major Systems: Mental Health (EIS) **Eligibility (ACES) Network Infrastructure MaineCare (MECMS) Data/Systems Integration Public Health (IPHIS, CAREFACTS) Child Welfare (MACWIS)** Health & Environmental Lab (LITS+, StarLIMS) **Desktop Support Capitation (MECAPS) Long Term Care Placement (MECARE) Web Development Child Support (NECSES) Administrative Support Legacy (WELFRE) Special Projects**

Eastside Wellness Center Opening September 8th!

By Marion Bowman

Located on the eastside of the Kennebec River, on what was formerly known as the "AMHI campus", is the newly renovated Eastside Wellness Center. An open house is being planned for later in the month.

Need to work out to improve your health? Who doesn't? State employees have never had a Wellness Center to use, and this project, which has refurbished the former Augusta Mental Health Institute's gymnasium,¹ is a major step forward for our health! New tile floors have been installed, painting, electrical, and plumbing continues is being updated and new lights will be installed in the gym. Locker rooms will have lockers with locks, new paint and shower curtains. New exercise equipment was delivered in late August.

The new Wellness and Fitness Coordinator, Lyndsay C. Collins, began her duties August 2. She will also be coordinating a pilot aerobics program with the KV YMCA in addition to other gym activities. Two other positions will be filled shortly (one full time and one part time).

We anticipate the Eastside Wellness Center will be open as follows: 6 am - 6 pm Monday - Thursday, and 6 am - 2 pm on Friday.

Kudos to all who have worked hard to make this resource available to State employees! (More on this story in an upcoming issue.) Meanwhile, click here http://www.state.me.us/dafs/safety/news/index.html to view some photographs of the renovation work.

For more information on the new Eastside Wellness Center and its services, please e-mail Lyndsay. C. Collins@ Maine.gov.

¹ Located just behind the Marquardt Building

The U.S. General Services Administration's ".GOV" Internet Domain Registry, has exceeded initial expectations and resources, and has asked government entities to pay \$125 a year to cover registration and renewal costs, starting July 31, 2004. For information on the .GOV Domain Registry, contact Daisy Bhagowalia, (703) 306-6238; daisy.bhagowalia@gsa.gov.

Project and Portfolio Management

By Mary Silva

The State of Maine Information Services Policy Board has adopted two new policies (Project and Portfolio Management) in order to formalize and standardize these processes throughout State government.

The Portfolio Management Policy requires agencies maintain current strategic business and Information Technology (IT) plans and project status reports, document their technology infrastructure and inventory their technology investments/assets and projects. It also requires all technology projects be conducted in a disciplined, well-managed, and consistent manner that promotes the delivery of quality products, which are completed on time, and within budget. These policies provide the structure to improve the management of IT resources and investments, critical at any time, but even more so as the State continues to face budget constraints.

The Office of the CIO (OCIO) is developing programs and resources to assist in moving toward full compliance with the policies. Current and anticipated resources include the following.

- Project and Portfolio Management intranet websites that provide report templates, examples of reports required in an agency's portfolio and additional information on both policies. (http://inet.state.me.us/cio/ projectmanagement).
- An Information Technology Project Management Discussion Group which will meet once a month.
- Project Management training which will be funded in part by the OCIO.
- Executive Project Management overview sessions will be held in September.

The OCIO will begin reviewing agency and/or department portfolios in early October 2004. This first pass will:

- create a baseline to document status regarding data collection,
- · identify any process and/or policy issues, and
- · define needed additional resources.

While initially a manual process, we will research automation tools that can evaluate portfolios and provide significant analysis regarding the health of IT investments. Automated tools may also highlight where an agency/department is getting the best return on their investments.

New technology projects with a projected cost of \$250,000+ will be required to follow all the reporting requirements outlined on the Project Management Protocol Website, including the submission of a standard monthly project summary report to the OCIO.

Questions? Comments? Contact Mary Silva by e-mailing mary.silva@maine.gov or calling 624-7574.

eDMR Effort Directly Affects Maine Municipalities

BY CINDY WURPEL

The Department of Environmental Protection (DEP) was seeking improvements in the process by which public and private waste water treatment facilities provide periodic reports to the DEP.

Dick Darling, Environmental Engineer Specialist in the DEP's Land and Water Quality division wrote a grant proposal to electronically capture water test results in a centrally supported DEP database, and automatically produce an on-line, end of the month monitoring report known as the Discharge Monitoring Report. The old process involved mainframe processing, multi-part forms printing, tabulations at the facility, manual form completion and mailing — lots of mailing. The improvements offered by this new process would be many:

- Process improvements submission/approval process could be reduced by weeks, and mailing costs substantially reduced;
- Error checking and correction, and business rule enforcement at the source of the data;
- Information reporting improvements a comprehensive data repository would be available for statistical reporting; and
- Reduction of the amount of time facilities managers invest in producing the DEP reports.

The project's goal was to develop and implement an electronic, fully secured system to replace the current system, which was prone to recording and arithmetic errors due to the large number of entries and calculations recorded, computed, and transcribed.

The grant was awarded and the Bureau of Information Services (BIS) was given the opportunity to propose a webenabled solution, utilizing the global nature of the Internet to bring data entry technology to the treatment facilities located throughout Maine. BIS had been looking for a project that would be a good fit as a JAVA learning opportunity. This project was the perfect candidate, in that it was limited in scope and had no severe time restrictions. DEP and BIS agreed to share the trials and tribulations of learning how to develop systems utilizing object-oriented techniques.

A team of BIS programmers are developing the electronic DMR (eDMR) utilizing JAVA within a STRUTS framework, with plans to implement in late fall of 2004. This project has provided the hands-on experience needed to position BIS to assume the maintenance and implementation of third-party systems which the State will be supporting in the near future. This project is noteworthy in that eGovernment is being utilized to improve the way Maine businesses and municipalities interact with State government, with benefits to all.

Questions? Contact the author by e-mailing cindy.wurpel@maine.gov.

MARVEL!

Research Databases - Investing in Maine's Students and Future

BY MARILYN LUTZ

MARVEL! Maine's Virtual Library links (www.maine.gov/marvel) to a core set of databases for K-12, public and



academic libraries, as well as business and special library constituencies, and all Maine residents using an Internet connection. Since its inception in 2000, MAR-VEL! (made possible through the Maine State Library's program for delivering statewide licensed resources), has provided access to a collection of materials that supports research, instructional, and information needs of all Mainers.

In 2002 support from the Public Utilities Commission made available additional funds from the Maine Telecommunication Education Access Fund (MTEAF) to purchase electronic database resources for accessing information by schools and libraries. The MTEAF support made it possible to double the number of database subscriptions available to Maine's citizens.

There are well over 30 states with statewide database programs. Funding for these programs varies from state to state, and usually is a combination of resources. Key to most programs is money appropriated by the state legislature. While funds for this year's subscriptions (2004-2005) was made possible with renewed support from MTEAF, this year marks the last year in which the funds will be available. Despite past generous support, access to several critical database subscriptions was lost for this next year due to cost increases.

A request for funding and support from Maine's legislature will be essential for the continuation of the Maine State Library's current program to make information resources available to all Mainers. This is an equitable, cooperative, and cost effective approach to purchase digital information to serve Maine's educational, social, and economic needs. Without the statewide licensing program, access to these vital resources would not be possible for many Maine libraries.

Increasing Access to a Broad Range of Information Resources
All of the MARVEL! databases have been carefully selected to provide types of resources that will meet information

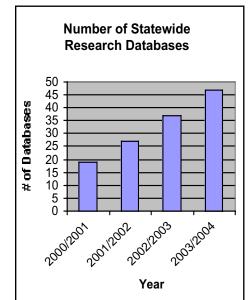
needs in all types of libraries. The current list of MARVEL! databases provide access to the full text of articles in over 29,000 journals and newspapers, as well as full text works of poetry and literature, encyclopedias and reference works, and other informational services such as statistical reports, company financial and investment reports, and business directories. Also available are over 500 US and international newspapers, including the New York Times, Wall Street Journal, Boston Globe, Times of London, Bangor Daily News and the Portland Press Herald. Half of the research databases provide access to social, scientific and governmental resources. Mainers may also reference or check out 8000 electronic books, including the world's classics.

Satisfing a Variety of Research Needs and Fostering Economic Development The variety of information available through MARVEL! is illustrated by user feedback. One scholar describes MARVEL! as invaluable for the research performed in his laboratory and essential for him and his graduate students to keep up-to-date on current developments and cutting-edge scholarship that are critical to all disciplines, but particularly vital to the sciences. Access to journals in the BIOSIS database and the on-line Nature journal are indispensable for them.

At a different point in the education spectrum, middle school aged students are completing assignments with access to primary resources in Middle Search Plus and the Encyclopedia Britannica's Annals of American History, and doing this work from home computers after the libraries are closed. Citizens from

all social strata pursue information about health issues, consumer issues, investment issues, and government policy in an effort to advance to a better life.

- continued on page 5 -



Marvel's "Top Ten"

Based on % of searches on Marvel. Does not Include library catalog statistics.

Academic Search Premier	178,021
Proquest Newspapers	87,906
Encyclopedia Britannica	73,523
MAS Ultra School	64,086
MasterFile Premier	61,751
Middle Search Plus	52,759
Business and Company	
Resource Center	42,345
Nursing and Allied	
Health Collection	41,796
Novelist	41,796
BIOSIS	41,133
	,

MARVEL, cont.

While you might not make the connection between MARVEL! and economic development, in some situations they are inseparable. A consulting engineer was asked by a medium-sized manufacturing company to help them plot the company's future. He used MARVEL! to access Business Resource Premier and Business and Company Resource Center to quickly research the trends and changes that the company would have to make in order for them to remain competitive, and presented his findings to the company's top management. Access to MARVEL! resources covering the breadth of available research and scholarship are essential to support and create a robust 21st century Maine economy.

Collaborating For over a decade the Maine State Library has partnered with the University of Maine System Libraries to build a statewide network of library resources. Through the combined initiatives and resources of this partnership, Maine's citizens may make on-line requests for books and journals from any library via the Maine Info Net catalog. And now MARVEL! makes possible shared access to electronic full text databases.

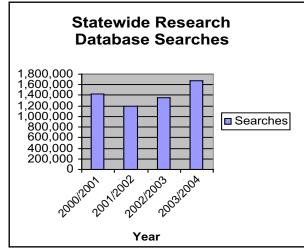
Because digital information does not need to live anywhere in particular and can be accessed from anywhere via the network, sharing in the development of digital collections enables libraries to collaborate in a variety of essential tasks, including: identifying resources, reviewing products, negotiating with vendors, and acquiring and making the resources accessible. The MARVEL! collection is central and shared by all, and

its creation expands the experience, training, and knowledge of many librarians, not to mention the key role MAR-VEL! plays for them answering many reference questions.

Maine libraries have proven that cooperation and statewide licensing of information resources not only reduce the rate of increase in library costs, but also extend the buying power of the individual library budget. The college and university libraries can buy more research materials, while school and public libraries gain access to resources formerly beyond their means. Cost savings for Maine's libraries is in the millions of dollars if prices for the statewide licensed databases are compared to the list prices individual institutions would pay for databases if purchased separately.

Investing in Maine's Students and Future MARVEL! delivers an essential service that makes a difference for education, research, business, and Maine's future. At the same time, it enhances the public image of all libraries instead of the superior services of only one library, and increases overall library use. While the statewide network was the great equalizer for the geographic barriers of Maine, it is equity of access to sophisticated and expensive electronic information that is a major accomplishment.

Marilyn Lutz is the Director of Information Technology Planning at the University of Maine's Fogler Library in Orono, Maine. Marilyn is also a member of the InforME and GeoLibrary Boards, and may be reached with questions by emailing Lutz@maine.edu or calling 207-581-1658.

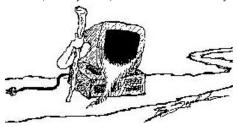


Users continue to gain better access while seeing more integration between citations, articles, images and other data types as new information resources are added. Many of the citation databases use a single interface, simplifying their use. Users can also access multiple databases in their area of interest by a single search and receive online help.

GeoArchives Project

By State Archivist, Jim Henderson

After nearly 20 years of State agencies collecting data in Geographic Information Systems (GIS), we realized that Maine citizens were in danger of losing access to this information, since there were no standards governing retention. Access could also be lost due to the relentless changes in technology (remember 5 ^{1/4}" floppy discs?), if the data were not migrated when systems were upgraded. Saving paper maps would not address this problem. A new system is needed to "retire", instead of "delete" archivally valuable GIS data, in an automated, non-intrusive (to daily work), and standardized way.



Recognizing that all the other 49 states share our dilemma, the <u>National Historical Publications and Records Commission</u>¹, at its May, 2004 meeting, approved the GeoArchives proposal submitted by the State Archives, in collaboration with the Maine Office of GIS (MEGIS), which will

- create standards in order to designate a select set of Maine State Geographic Information System (GIS) records as archival,
- 2) develop, in partnership with the GeoLibrary, an internet-based GeoArchives system prototype, and implement it for a selected set of archival GIS records, and
- amend Archives Advisory Board, GeoLibrary, and Information Services Policy Board rules to recognize and enforce the implementation of the new standard(s) and prototype throughout Maine government.

Starting in July, the project team has considered the various methods of archiving GIS data, based upon research conducted by Bob Bistrais, a senior programmer analyst at MEGIS. Because GIS data is complex, understanding and choosing vendor neutral approach(es) to document archivally important changes over time, occupied the team's attention throughout the summer.

The challenge is considerable. For example the E-9-1-1 roads layer is constantly being updated, and the team is striving to - continued on page 6 -

GeoArchives Project, cont.

develop a prototype which would enable Internet users to peel away changes by date, in order to map, in this example, the roads as they had been at a previous time chosen by the user. Versioning, a recent feature of ESRI's Arc Editor "creates point-in-time representations of the database to manage history-2" MEGIS' experience to date with versioning concerns its ability to support multiple, concurrent database editors³, and many issues must be researched, to ascertain if versioning could be used in developing this prototype.

There is also the question of "what State agency-owned GIS data is archival"? The team anticipates there is valuable GIS data held by State agencies that is not included in the MEGIS Data Catalog (http://megis.maine.gov/catalog/). Thus, throughout the autumn, presentations describing the project and its anticipated outcomes will be made to the GeoLibrary Board, Information Services Policy Board, GIS Executive Council, and others.

Since there are no State archival standards for GIS data currently, we intend to solicit input from these agencies and others to draft standards and develop a needs assessment in order to fine tune prototype deliverables. We will also seek input from consulting experts in GIS and Archives disciplines. This process will unfold over the next 18 months, and progress will be published on the project's web site.

Does your agency have GIS data, that you feel will be of interest to citizens in the future? Perhaps you think this data layer would be a good candidate upon which to test the system prototype? (We anticipate 4-5 datasets will be chosen this fall.)

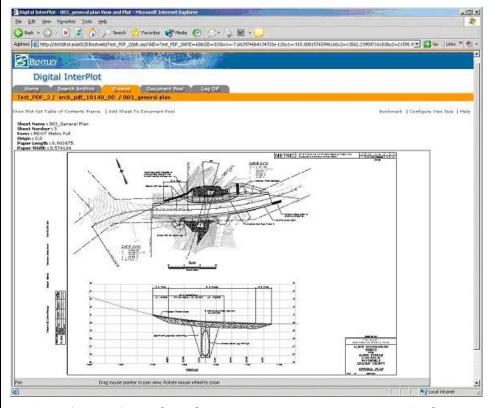
Please feel free to contact GeoArchives project manager Mary Cloutier by e-mailing mary.cloutier@maine.gov or calling 207-624-7536.

Electronic Plans Archive at Maine DOT

BY DENNIS FOLSOM

Imagine a future where Maine Department of Transportation (MDOT) employees can search their Plans Archive (approximately 150,000 plan sheets dating from the early 1900's to the present) electronically through their computer's web browser. They will be able to specify a combination of search criteria, (town name, route number, project number, etc.) and retrieve a set of thumbnail images of plans that match criteria. From this set, they click on a sheet's thumbnail, opening a full-screen view, which may be panned and zoomed to illustrate details. They will be able to print full-size (to scale), half size, or reduced to fit any printer (such as 8.5×11). CADD¹ software or training is unneeded.

The future starts now! MDOT staff and contractors have just installed Pilot Phase data into the Electronic Plans archiving system. Already, they can retrieve, view and print these plans as described above. More drawings will be added in large batches, and MDOT expects to complete scanning and archiving of Right of Way plans and drawings from the Plans Vault, by early 2005.



Scanning Project Through an RFP procurement process, MDOT has contracted with Smooth Solutions of Lodi, NJ, to scan the plans, post-process the images, apply indexing data, and install the indexed images in their Digital InterPlot archiving system. The contract also requires an indexed microfilm backup set and a set of the image files on DVD media.

Subcontractor Symmetry Systems, Inc., of Clifton Park, NY, is assisting with the database configuration and will process the images and indexes into Digital InterPlot. Smooth Solutions and Symmetry Systems, have successfully completed a similar project for the Vermont Agency of Transportation.

Archive and Retrieval System MDOT has installed servers and software to support this system. The images reside in a "disk farm" attached to a file server. The index data resides in an Oracle database system. A Plot Server is the "engine" which processes plots and images into Digital InterPlot, and handles other plot generation tasks. A web server generates the web pages that are viewed by the system's users.

- continued on page 7

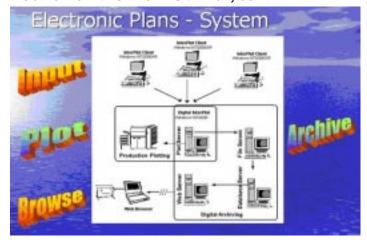
¹ http://www.archives.gov/grants/commission_meetings/may 2004.html

² http://www.esri.com/software/arcgis/arceditor/about/ versioning.html

Versioning explicitly records states (versions) of individual features and objects as they are modified, added, and "retired." A version explicitly records each state of a feature or object as a row in a table along with important transaction information. http://www.esri.com/software/arcgis/geodatabase/about/versioning.html

³ For more information see the June Maine IS Technology article, GIS Common Editing Environment By David Kirouac http://www.maine.gov/newsletter/june2004/gis_common_editing_environment.htm

Electronic Plans Archive at DOT, cont.



For now, this archive system is accessible only from computers within Maine State government's network. Infrastructure, logistics, security, and state government web policy issues must be addressed prior to Internet viewing.

Ongoing Archiving What about new plans as projects are constructed? One of the key features of the Digital InterPlot system is the ability to "plot" from MDOT's MicroStation drafting system to the archive. When new contract plans are approved for construction, an "archive librarian" will plot them to the archive, along with appropriate index data.

Other types of plans are being discussed for system archiving. Likely candidates include public hearing plans, "as-built" plans modified during construction, and preliminary plans for high-interest projects, such as the Prospect-Verona Bridge.

How Does This Relate to Other Document Management Systems? MDOT has a system called TEDOCS for electronic storage and retrieval of most documents (generally 8.5 x 11 or 8.5 x 14 in size). This Electronic Plans system will be used to store and retrieve plans and other large format items. Both of these systems are searched through a web browser interface and both have their index data stored in Oracle. A future enhancement may produce a "superquery" that will search both systems. It is envisioned that the user would click on a query results item to launch the appropriate viewer.

Future Electronic Plans Enhancements The archive and retrieval system described above is only part of MDOT's Electronic Plans implementation. Other planned features include full electronic plan set production, and posting electronic plan sets on the Bid Express website, along with our electronic bids, starting in early 2005.

The implementation of Electronic Plans technology will eventually affect the workflow. MDOT will be able to implement systems for electronic review and approval of plans onscreen (or printed to paper if desired), and for the use of electronic signature technology to ensure validity.

For more information contact Dennis Folsom by calling 624-3179, or e-mailing dennis.folsom@maine.gov. He can send State government network users links to intranet pages providing access to the Electronic Plans system, and a descriptive PowerPoint presentation.

Major System Migration Completed MeTrans in Production at Maine DOT

For more than 20 years TINIS, the Maine Department of Transportation's (MDOT) integrated highway information system, has provided a means of locating assets and projects. However, it has not been easy to integrate TINIS (a mainframe legacy system) with modern relational databases or Geographic Information Systems (GIS). To address these deficiencies, MDOT chose to buy a commercial off-the-shelf (COTS) software package called Highways by Exor.

The Network Manager and Spatial Data Manager modules of Highways by Exor were implemented in June as part of the METRANS project. The new system provides both a linear referencing and a spatial network hub, which enables MDOT to synchronize location referencing data in Highways by Exor with other departmental systems.

Initially Highways by Exor was acquired as a linear referencing management system to enable MDOT's Systems Management Division (SMD) to maintain a database of 22,669 miles of public roads throughout Maine. In late 2003, SMD started using Highways by Exor to manage and query their highway inventory database, which consists of 71,141 anchor section records and 29,073 routes on 6 route systems. The system's multiple linear referencing capability enables users to use any of the route systems to query asset records. Since network and asset geography is integrated into the Highways by Exor database, each record is edited once, and Highways by Exor keeps spatial, linear referencing, and attribute information synchronized. In the future, MDOT anticipates that its project tracking system and the systems that manage accidents, bridges, and pavement data will also be synchronized with the up-to-date network location information in Highways by Exor. 45

For questions, or for more information regarding the METRANS project, contact John Monroe by calling 624-3256 or e-mailing john.monroe@maine.gov. For additional information about Exor Corporation, contact Brett Rogers by calling (978) 239-4504 or e-mailing brogers@exorcorp.com. Exor systems are used to manage over three quarters of a million miles of roads worldwide.

¹ The Department chose to buy COTS technology rather than develop a new system in-house because this reduced the risk, and the project's implementation time-frame. The support and maintenance offered by the COTS software vendor ensures that the system will be easy to adapt and upgrade to meet changing requirements, and to take advantage of advances in database and GIS technology.



Challenge

By Lester Dickey

John was eager to join his girlfriend Mary for dinner. It was a 24 mile trip upstream to visit her. His boat's speed is 14 mph in still water but the current is running 4 mph against him. He just filled his 20 gallon tank

and he knows he uses 6 gallons per hour. Will he make it to Mary's house or will he run out of gas?

For an extra challenge, but no prize: With the same conditions above, except the current is now with him, and without adding gas to his tank, how long will it take him to get home?

- continued on page 8

¹ Computer Aided Design and Drafting



Melicent Versteeg – an Autobiography

While a mother of two wonderful teenagers, I became hooked on computer programming in 1982 when I took a class in BASIC at the University of Maine at Augusta¹. I quickly discovered computers, unlike teenagers, would immediately do whatever I requested without complaint! Coding also taught me to pay attention to details, in-

cluding what I said or wrote, so I communicated better with machines and people.

In 1985, when I came to the Bureau of Taxation², six staff shared two terminals (our supervisor had another). Working in groups, we wrote COBOL code, JCL and "debugged" programs. A common assignment was "go make these cards on the key punch machine". Computer people of the 1970-80s will remember machines which resembled factory equipment: DEC writers, dumb terminals, keypunch, card readers, greenbar printouts, and round tapes. All are dinosaurs now.



Gone for most of us are spaghetti code, "goTo", "goSub", superCal, DOS and several computer languages.

"Experienced" with personal computers (PC), in 1986 I got

Taxation's first — a 256K ATT. Its memory was considered sufficient to perform all of the Bureau's word processing and "adding machine" needs. No one anticipated PCs could ever replace mainframes – too little memory, too slow, too limited, too much data. There was no e-mail, internet, or intranet; we talked to others in person or via telephone. If we wanted to share data, floppy disks were hand carried or snailmailed. Technology has come a LONG way during the last 25 years!

Challenge, cont.

Please e-mail **Lester Dickey** with your answer and your name, phone number, and the organization for which you work. Or call **Barbara Buck** at **624-9501**. The winner will be drawn from all the correct entries and will receive a **FREE** donated pizza, either from **CJ's Pizza** or from the **EDOC Cafeteria**. All answers must be in no later than the **14th** of the month.

Last issue's challenge brought 63 submissions, with 30 having correct answers. The winner, chosen by random drawing, is **Richard Washburn** of **Maine Revenue Services**.

The answers to last issue's Challenge: My assumption was that "to make change" means to use coins in value less than a dollar, so the dollar, and higher denomination, coin were not used. I could have stated this, but I wanted the "Challenge" to actually be a little challenging! Based on that assumption, the most money I can have in my hand is \$1.19. This can be accomplished in three ways: 3Q, 4D, 4P (11 coins); 1H, 1Q, 4D, 4P (10 coins); and 1Q, 9D, 4P (14 coins). Each of these answers was accepted.

An Augusta native, I now live in the same house where I grew up. However, armed with a BA in medical technology from Orono, in the mid 1960's I worked in pharmaceutical research in Detroit, Michigan. I met my husband, a history museum curator and, before returning to Maine in 1977, we lived in Michigan, New York, and Illinois, where he managed museums. While our children were young, I was active in 4-H, scouts, camping, etc. Now our son is a technical support person for IDX in Boston and is married to a graphic and multimedia designer, who specializes in developing ELearning courses. Our daughter is a sign language interpreter in the Winterport, Maine, school system.

Hobbies? I am a Ham radio operator, a church Certified Lay Speaker, and am active in diabetes support organizations, Landmark Education, Maine State Employees Combined Charitable Appeal and other community and civic causes for which I have been honored several times - including Augusta's Spirit of America award.

Travel is one of my passions. I have explored 49 states and have tickets to the 50th, Hawaii. Since I retired last month, my husband and I are preparing for our dream trip even as you read this. While a friend house-sits, we will RV (recreational vehicle) across America, visiting friends, relatives, historic and natural wonders, and sites of interest. Naturally we're using the Internet to plan our itinerary, and have reserved front row parking spots along Pasadena's New Year's Day Rose Parade route! Afterwards we'll enjoy a week's cruise around the Hawaiian Islands and another week in Honolulu. Then we'll RV to Belleview, Florida. Since we will use a laptop and digital camera to keep in touch via e-mail, and to share pictures with friends and family, technology will continue to be part of our lives.

I hope you also will be able to experience your dreams when you retire. $\sqrt{s_2}$

TRANSITIONS

TECHNOLOGY PERSONNEL CHANGES IN YOUR AGENCY?
SEND NOTICES TO mary.cloutier@maine.gov to have them posted here.

Effective August 9, 2004 **Diane Robbins** was promoted to Technical Support Specialist in the Bureau of Information Services' Production Services UNIX group. Returning to college, **Elizabeth Hunt**, Cartographer on the Development Ser-

vices' Geographic Information Services team, resigned effective August 20, 2004.

EDITORIAL BOARD

Mary N. Cloutier (BIS), Editor

Members:
Janey Barton (BIS)
M.D. Bowman (BIS)
David H. Ellis (BIS)
Robert Witham (BIS)
Colleen Gesualdo (MDOT)
Jeffrey W. Cotnoir (BIS)

Susan Spinell (Maine Conservation Corps)

Karen Knox (BIS), On-line Editor

Challenge: Lester Dickey (Maine Revenue Services)

Proofreaders: Ann Salverson-Seales (BIS) Dale Blake (BIS) Anji Brockmann (MEGIS)

Send your comments or suggestions to us at: neb.newsletter@maine.gov or via our newsletter Web site on the Internet at: http://www.maine.gov/newsletter/index.htm

PRINTED BY IDEAL PRINTING SERVICE, AUGUSTA, MAINE UNDER APPROPRIATION 038-18B-1000-012

¹ Associate degree in computer programming (1990) and a BS in business administration (1996) from UMA with a 3.9 GPA.

² now known as Maine Revenue Services